

## **REMARKS**

Claims 1-8 and 10-16 were previously pending in the subject patent application. Claims 1-3, 6-8 and 10-16 stand rejected. Claims 4 and 5 merely were objected to as depending from a rejected claim, but otherwise are patentable.

In response, Claim 4 has been canceled and its subject matter added to claim 1. Claim 8 has been rewritten in independent form. Claims 13 and 14 also have been canceled. New claims 17-19 have been added. Claims 1-3, 5-8, 10-12 and 15-19 will be pending after entry of this amendment.

### **Rejection Under 35 U.S.C. § 112**

Claims 2, 7, 8, and 13-16 were rejected under the second paragraph of 35 U.S.C. § 112 as being indefinite as to whether the subject matter being claimed constitutes the apparatus alone or in combination with a door and a vehicle.

Claim 2 has been amended to state that one of the first and second linkage assemblies is adapted to interconnect the fluid cylinder to either the vehicle or the door, and the other linkage assembly is adapted to interconnect the piston to the other one of the door or vehicle. This claim also states that the two linkage assemblies cooperate with the piston and the fluid cylinder for moving the door. It is respectfully submitted that this amended language clearly defines the invention as being the apparatus alone and that certain elements of that apparatus are structurally limited for particular types of interconnection.

Claim 7 has been amended to simply state that the generation of the gas moves the piston, and reference to movement of the door has been deleted. Also the ultimate phrase regarding movement of the door between its first and second positions has been deleted from claim 7.

Rewriting claim 8 in independent form has used amended versions of paragraphs from original claim 1. In those amended paragraphs, the fluid cylinder and piston are adapted to be

operatively connected to the door and the vehicle, thus making it clear that neither the door nor the vehicle is part of the apparatus being claimed. The ultimate phrase regarding movement of the door between its first and second positions has been deleted from claim 8.

Claims 13 and 14 have been cancelled thereby rendering their rejection moot.

Claim 15 has been amended to state that the rotary actuator means is adapted to move the door. Similarly claim 16 has been amended to state that the rotary actuator means is adapted to move the door between closed and open states. These changes to claims 15 and 16 clearly impart structural limitations on the respected rotary actuator making it clear that the door is not part of the claimed apparatus.

It is submitted that pending claims 2, 7, 8, and 15-16 comply with the requirements of 35 U.S.C. § 112.

### **Rejection Under 35 U.S.C. § 102**

Claims 1, 3, 6, 10 and 11 were rejected under 35 U.S.C. § 102 as anticipated by Matsuki, *et al.*

The rejection of the claims 1, 3, and 10 has been rendered moot by the incorporation of the allowable subject matter from claim 4 into independent claim 1 from which claims 3 and 10 depend. Since the recent Office Action indicated that claim 4 would be allowable if rewritten in independent form, the present amendment of claim 1 overcomes the rejection under 35 U.S.C. § 102.

Claim 6 and 11 now depend from claim 8 which was not rejected under 35 U.S.C. § 102. These claims are patentable for the reasons stated below with respect to the patentability of claim 8.

### **Rejection Under 35 U.S.C. § 103**

Claims 2, 7, 8, and 12-16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Matsuki, *et al.* in view of Frey, *et al.*

The amendment of independent claim 1 to incorporate the allowable subject matter from claim 4 renders claims 2 and 7 patentable. Specifically, the gas generating device shown in Matsuki, *et al.* does not utilize a bridge wire to ignite the gas generating chemicals. Furthermore, Frey, *et al.* does not ignite any material to generate gas, but rather stores pressurized gas in a cylinder for use in opening the door in an emergency. Therefore, the incorporation of the bridge wire into the initiator of claim 1 renders claims 2 and 7 patentable.

Claim 8 has been rewritten in independent form by incorporating the fluid cylinder, piston, supply gas generating chemicals and the initiator from original claim 1. Claim 8 specifies a unique, safe and arm mechanism disposed between the initiator and the supply of gas generating chemicals. That mechanism has a safe position which prevents initiation of the gas generating chemicals if the initiator is activated. In an armed position, that mechanism facilitates initiation of the gas generating chemicals when the initiator is activated. Only the Matsuki, *et al.* device produces gas by the ignition of chemicals, however, that device does not provide any safe and arm mechanism which has a safe position that prevents the initiation of the chemicals even if the initiator is activated. In the Matsuki, *et al.* gas generating device, inertial force from a collision impels the inertia member 40 against the flange 24A of the hammer pin 24 (see Fig. 1). That action drives the tip of the hammer pin into the detonator 33. Nothing in this apparatus prevents that detonation from occurring in response to activation of that initiator 24. Nor is there any suggestion of a mechanism for preventing that action. Thus, the apparatus disclosed in the Matsuki, *et al.* patent always is in the “armed state”. Nothing in that reference device inhibits the operation of the initiator 24, much less is there an arm and safe mechanism that has both a safe position and an armed position.

The Frey, *et al.* device relates to an electrically operated pneumatic system that when triggered, opens a valve that conveys pressurized gas from a tank to the piston cylinder means 3 to move the door. Nothing in this patent suggests any type of safe and arm mechanism that in one state

prevents operation of the emergency door system, much less a safe and arm mechanism that could prevent detonation of the inertia operated gas generating device in Matsuki, *et al.*

As a consequence, nothing in the cited art suggests the apparatus for moving a door recited in claim 8 that includes a safe and arm mechanism. Therefore, claim 8 and its dependent claims 6, 11, 12 and 19 are patentable under 35 U.S.C. § 103.

Independent claim 15 specifies an apparatus for moving a door in which a supply of gas generating chemicals produces gas in response to operation of an initiator. That gas is then supplied to a rotary actuator that is adapted to move the door. Neither Matsuki, *et al.* nor Frey, *et al.* teaches a rotary actuator. Matsuki, *et al.* is directed toward a gas generating device that is used for activating an airbag or a seat belt pretensioner but does not suggest a rotary actuator for moving a door. Although Frey, *et al.* relates to an emergency door opening system, it teaches a cylinder and piston arrangement 3 that produces linear motion to slide the door into an open position (see the drawing). As a consequence, neither reference suggests a rotary actuator nor one that can be driven by gas pressure produced in either system.

Therefore, claims 15 and 16 are patentable under 35 U.S.C. § 103.

### **The New Claims**

Claim 17, depending from claim 1, states that the fluid cylinder and the piston are adapted to be operatively connected to move the door from a closed state to an open state. New claim 18 similarly states that the fluid cylinder and the piston in claim 1 are adapted to be operatively connected to move the door from an open state to a closed state. These claims are similar to original claims 13 and 14, but written in a manner in which it is clear that the door and the vehicle are work pieces and not part of the apparatus being claimed. These new claims are patentable for the same reasons stated above with respect to their base independent claim 1.

Claim 19, depending from claim 8, states that the initiator is in close proximity to the supply of gas generating chemicals and has a device for activating the initiator. This claim is patentable for the same reasons stated above with respect to its base independent claim 8.

## **Conclusion**

In view of these distinctions between the subject matter of the present claims and teachings of the cited patents, reconsideration and allowance of the present application are requested.

Dated: September 22, 2009

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